Improve Your Open Source Project Health With CHAOSS

London Data Week July 2024
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Helpful Links: https://linktr.ee/geekygirldawn

https://chaoss.community/
https://github.com/chaoss
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https://fastwonderblog.com/
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Thank You!

Whoami

Photos by Mom, Josh Bancroft, Don Park

- Geek, traveler, reader
- 20+ yr tech career focused on community & open source (VMware, Intel, Puppet, …)
- OpenUK Board
- CHAOSS Board and Maintainer
- CNCF TAG Contrib Strategy co-chair
- PhD on Linux kernel collaboration

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Agenda

- **Presentation (20 min)**
  - Overview and approaches
  - Responsiveness
  - Contributor sustainability
  - Organizational participation
- **Breakouts (20 min)**
- **Report outs from groups & wrap up (20 min)**

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CHAOSS: Community Health Analytics for Open Source Software

We are:

- An Open Source, Linux Foundation Project

- Globally distributed with 2000+ members in Slack

- A lovely place to spend your time

We are NOT:

- Not focused on medical health

- Not for-profit with any specific mandate
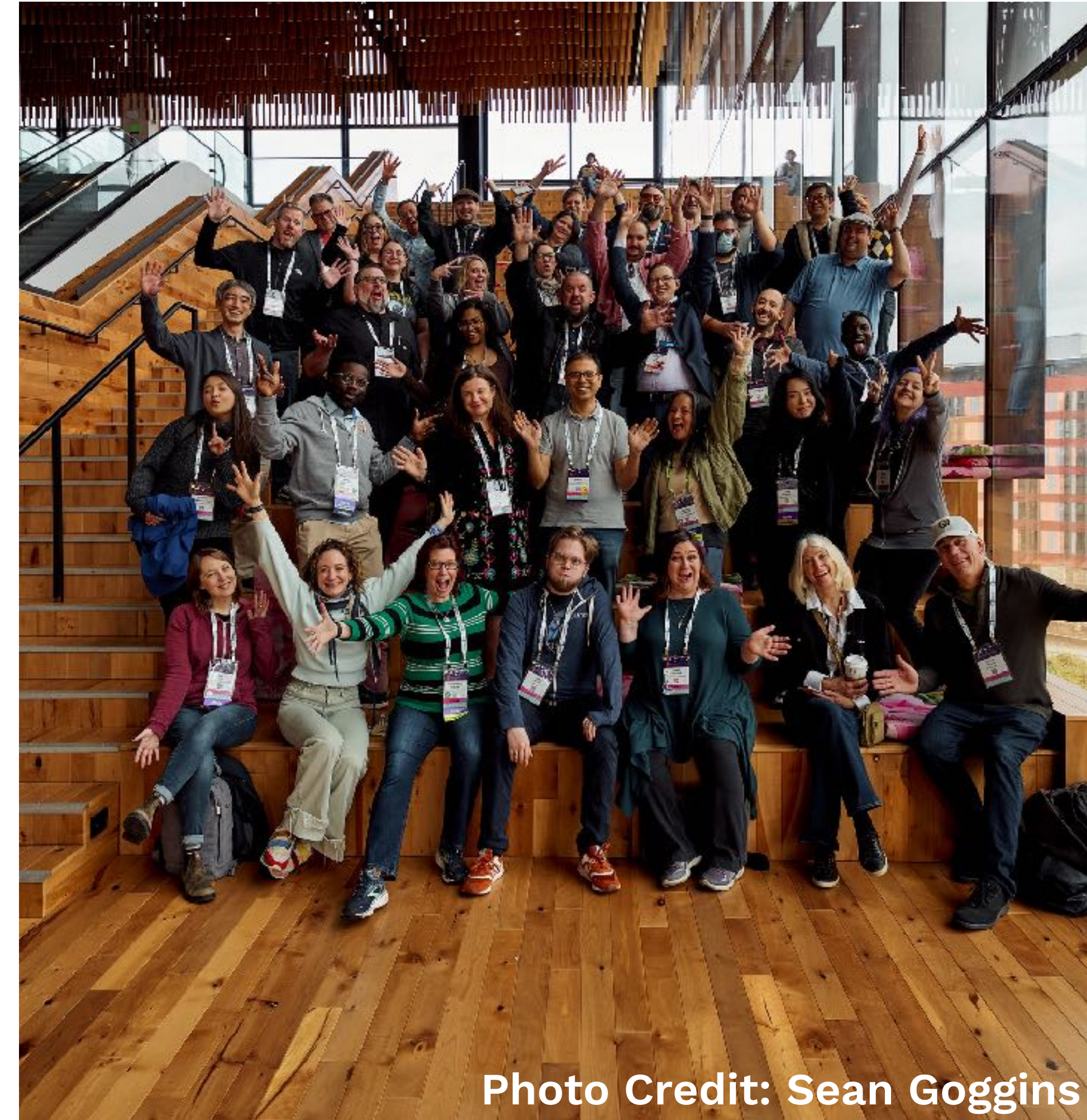
- Not only focused on code contributions

Photo Credit: Sean Goggins

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https://chaoss.community/kb-getting-started/

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Avoid the Tsunami

More isn't better:

- *Think* about your goals

- *What questions* should you answer

- *Focus* on a few metrics to interpret

- *Build* and add on from there

Goals → Questions → Metrics

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https://en.wikipedia.org/wiki/GQM

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Metrics Require Interpretation

Practitioner Guides:

- **Introduction**

- **Responsiveness**

- **Contributor Sustainability**

- **Organizational Participation**

- **More guides coming soon**

Photo by Martin Wilner on Unsplash

Metrics Strategy

Think strategically
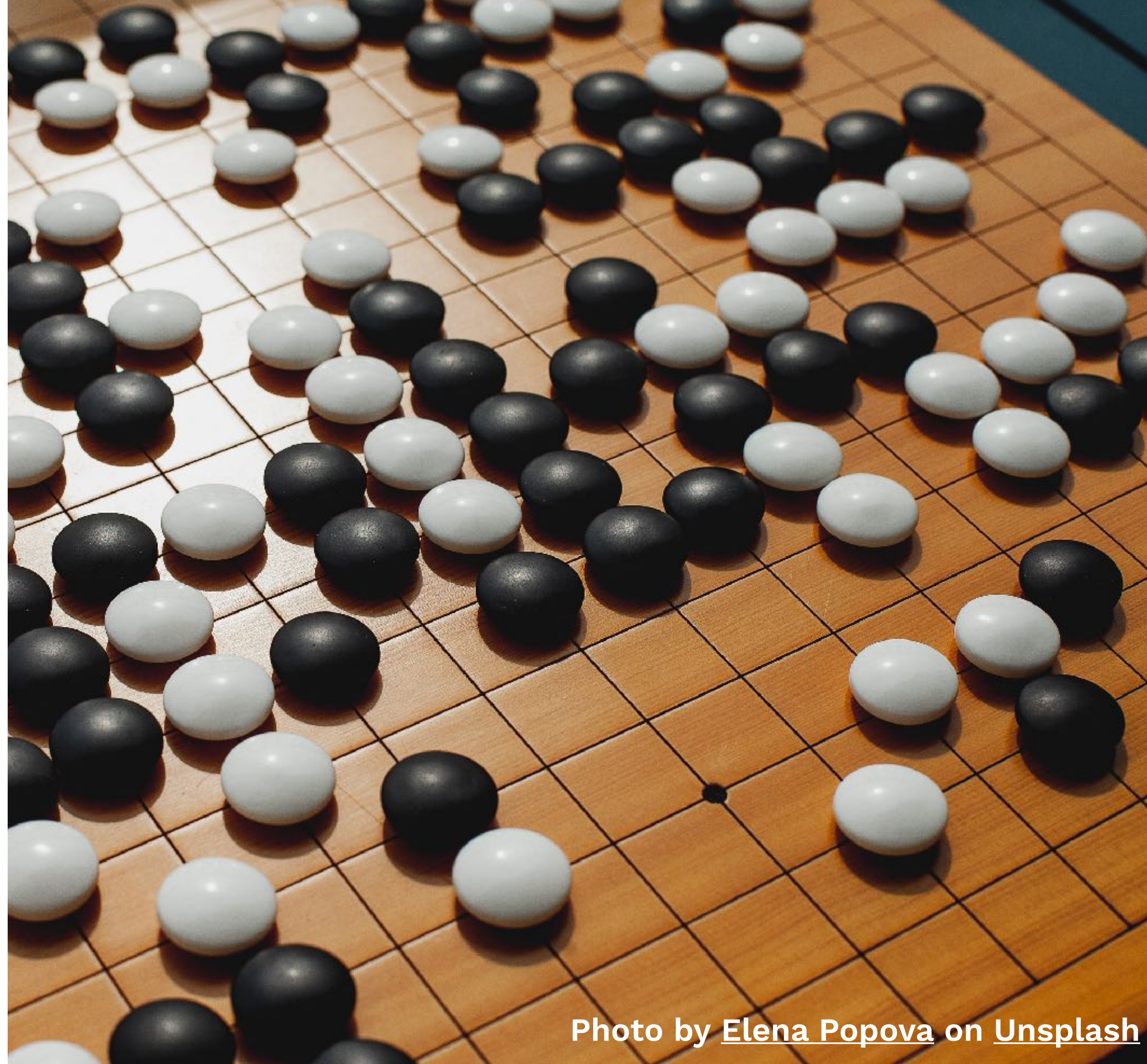about what you
want to accomplish and
customize your metrics

Photo by **Elena Popova** on **Unsplash**

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Collaborate with Your Community

A project's maintainers and contributors can help interpret your metrics and make the best improvements for that project.

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Responsiveness

Projects that can keep up with contributions will be more sustainable

Key metrics:

- **Time to First Response**

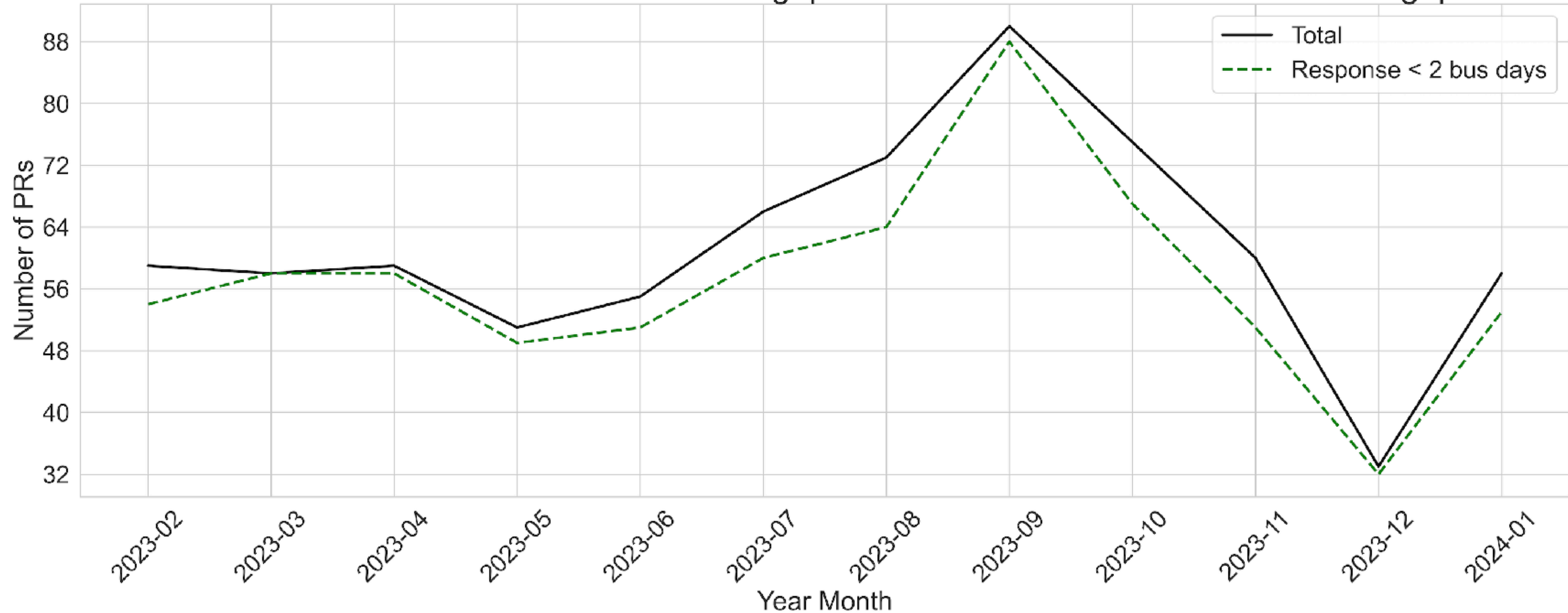- **Time to Close**

- **Change Request Closure Ratio**

https://chaoss.community/practitioner-guide-responsiveness/

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Responsiveness

Time to First Response
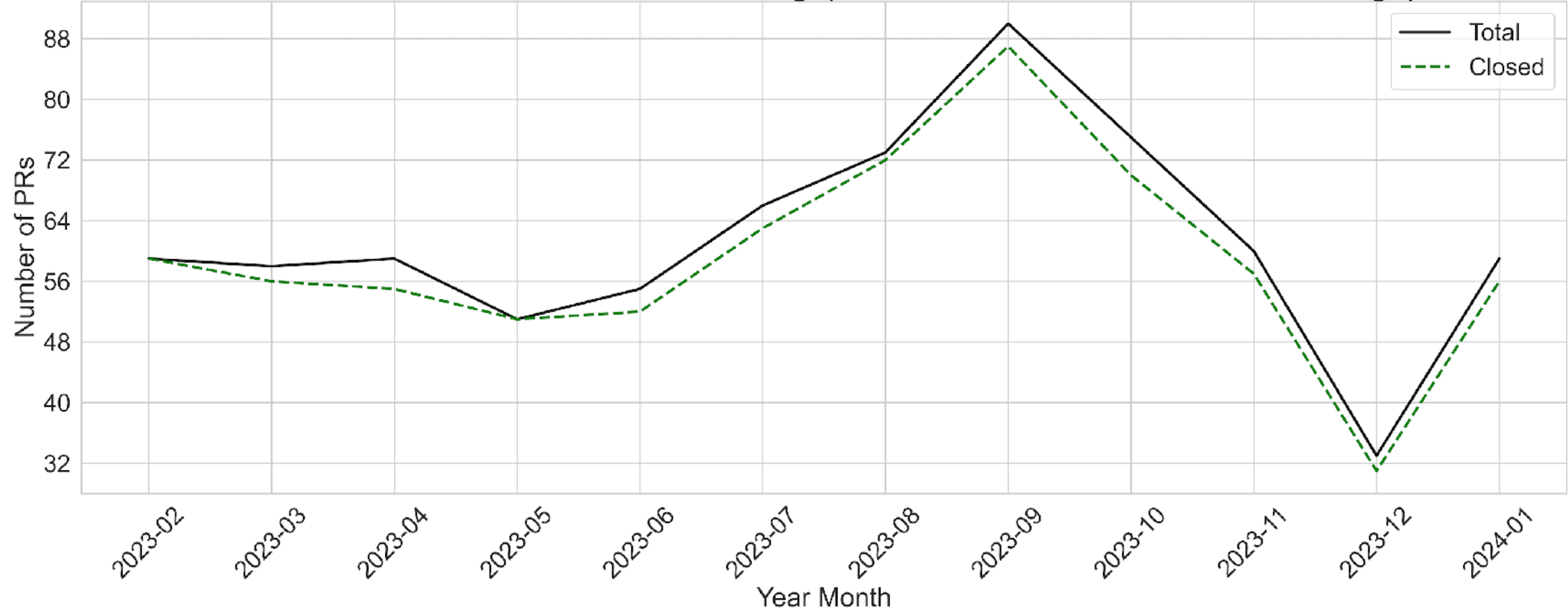Trend: Positive - the 2023-11 - 2024-01 gap is smaller than the 2023-08 - 2023-10 gap.

Interpretation: Healthy projects will have little or no gap. A large or increasing gap requires attention.

Responsiveness

Closure Ratio - Sustains and Keeps up with Contributions
Trend: Neutral - the 2023-11 - 2024-01 gap is similar to the 2023-08 - 2023-10 gap.

Interpretation: Healthy projects will have little or no gap. A large or increasing gap requires attention.

Contributor Sustainability

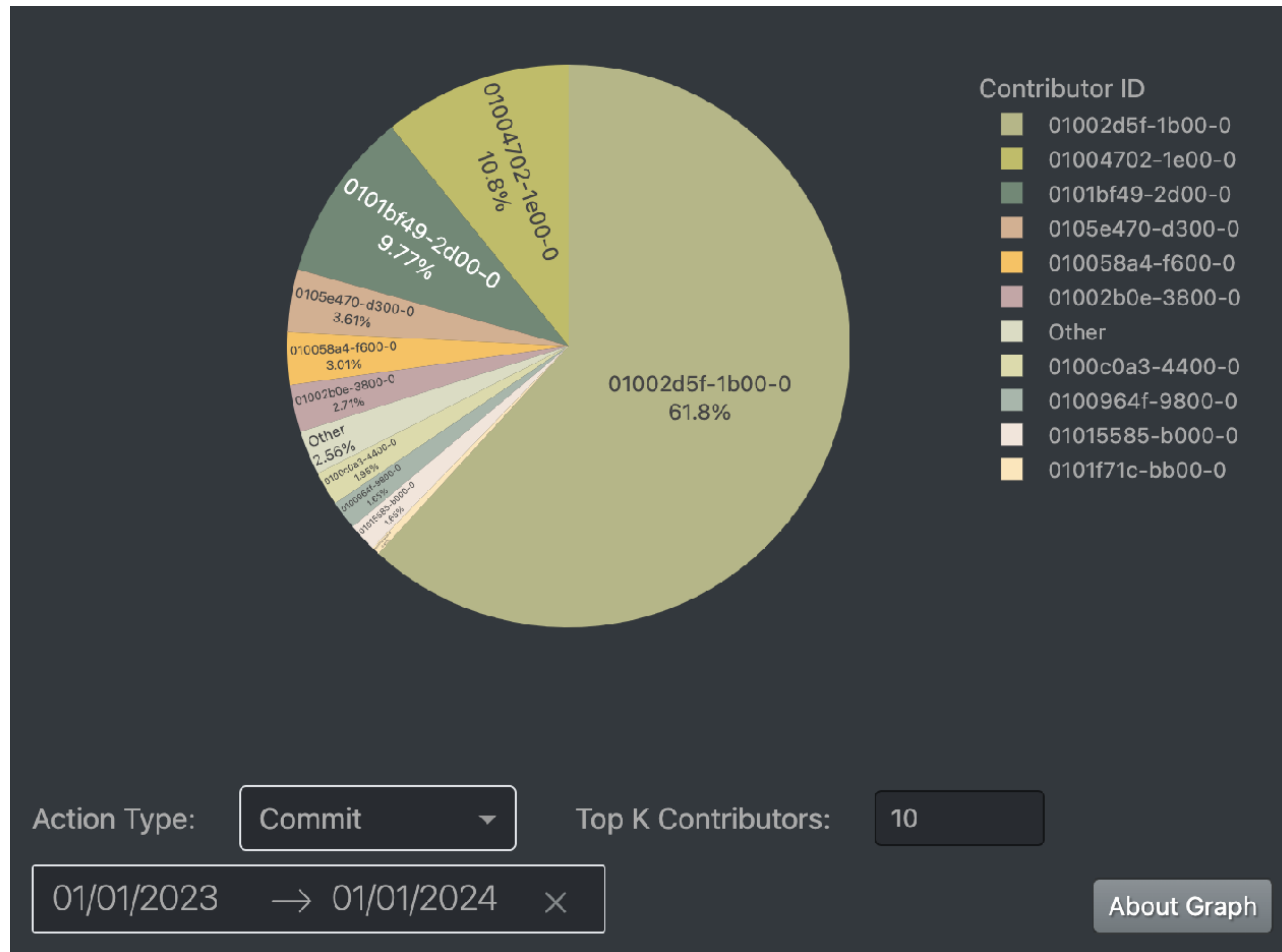**Projects without enough contributors to sustain them are at risk of failure.**

Key metrics:

- **Contributor Absence Factor (Bus Factor)**
- **Contributors**
- **Types of Contributions**

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Contributor Sustainability

Are there enough contributors to sustain the project if a key person left?

Organizational Participation

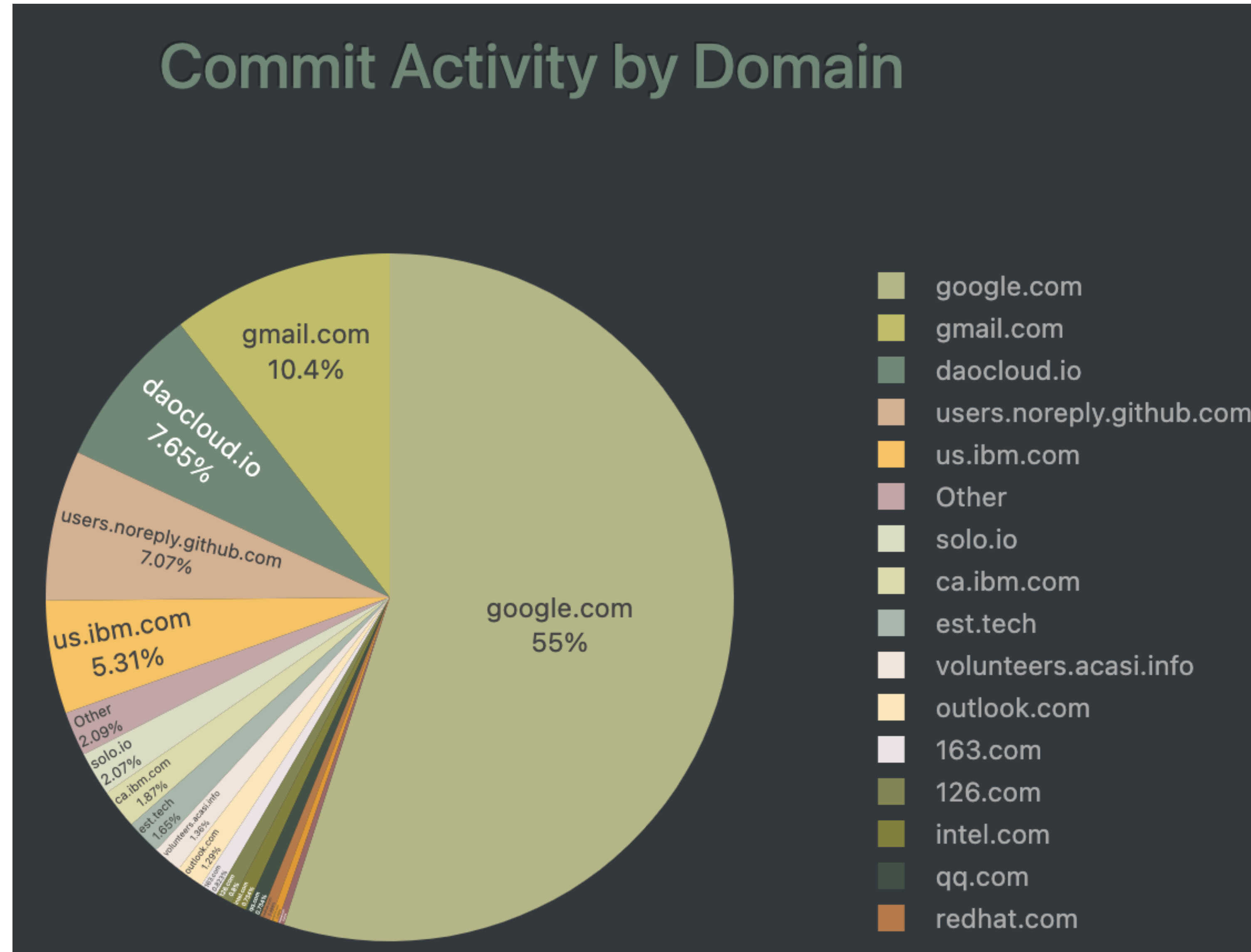**Projects dominated by a single organization might be less sustainable.**

Key metrics:

- Elephant Factor
- Organizational Influence
- Organizational Diversity

https://chaoss.community/practitioner-guide-organizational-participation/

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Organizational Participation

Getting clean organizational affiliation data can be a challenge. It just needs to be good enough to understand the dominant players.

Commit Activity by Domain

- google.com 55%
- gmail.com 10.4%
- daocloud.io 7.65%
- users.noreply.github.com 7.07%
- us.ibm.com 5.31%
- Other 2.09%
- solo.io 2.07%
- ca.ibm.com 1.87%
- est.tech 1.65%
- volunteers.acasi.info 1.36%
- outlook.com 1.29%

Legend:
- google.com
- gmail.com
- daocloud.io
- users.noreply.github.com
- us.ibm.com
- Other
- solo.io
- ca.ibm.com
- est.tech
- volunteers.acasi.info
- outlook.com
- 163.com
- 126.com
- intel.com
- qq.com
- redhat.com

Breakouts:
Groups of 3-5 people

20 Minutes - group discussions (add your notes in the <u>collaboration doc</u>)

- Pick a Guide topic: Responsiveness, Contributors, Organizations

- Goals: What are you trying to achieve with your project?

- Questions: What questions do you have that data could answer? What areas within your project do you want to investigate?

- Metrics: Which metrics are most important for your project?

- Improvements: How can you use what you learn to improve?

15 Minutes - report out from groups

- 1-2 key points - what did you learn / how will you use it?

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Helpful Links: <u>https://linktr.ee/geekygirldawn</u>

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Final Thoughts

Building healthy and sustainable open source projects is challenging. Identify issues using metrics and proactively improve before you have a crisis.

Photo by Isaac Smith on Unsplash

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https://chaoss.community/about-chaoss-practitioner-guides/

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THANK YOU!
Any Questions?

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https://fastwonderblog.com/
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